

A New Species of *Pseudeurythoe* (Polychaeta: Amphinomidae) from Central California

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Abstract.—A new species of *Pseudeurythoe* (Polychaeta: Amphinomidae) from central California by Jerry D. Kudenov and James A. Blake. *Bull. Southern California Acad. Sci.*, 84(1):38-40, 1985. A new intertidal amphinomid polychaete of the genus *Pseudeurythoe* is described from the Elkhorn Slough in central California. The species is compared to related congeners.

The genus *Pseudeurythoe* Fauvel (Polychaeta: Amphinomidae) is represented by 13 described species (Fauchald 1972; Kudenov 1975), four of which occur in the eastern Pacific. During the course of a benthic survey of the Elkhorn Slough, one of us (JAB) discovered a single specimen of an as yet undescribed species of *Pseudeurythoe*. That species is described here and compared with related congeners. The holotype is deposited in the National Museum of Natural History, Smithsonian Institution (USNM).

Pseudeurythoe Fauvel *Pseudeurythoe reducta*, n. sp.

Figure 1

Material examined.—CALIFORNIA: Moss Landing, Elkhorn Slough, June, 1976, Sta. 51A, 100 m north of thermal outfall, high intertidal zone, in fine sand. J. A. Blake collector—(Holotype, USNM 97288).

Description.—Holotype complete but fragmented, measuring 50 mm long and 6 mm wide for 96 setigers. Body elongate, widest anteriorly, tapering posteriorly, nearly rectangular in cross section; color in alcohol pink due to prior staining by Rose Bengal.

Prostomium pear-shaped, longer than wide (Fig. 1a); anterior lobe with smooth anterior margin, a pair of posteriorly located digitiform antennae and two ventrolateral cirriform palps; posterior lobe one-half as long as anterior lobe, bearing two pairs of well developed eyes, a small posteriorly located digitiform median antenna, and a short, pad-shaped caruncle on setiger 1, obscured by segmental folds of setigers 1-3.

Parapodia biramous throughout, with those of setiger 1 greatly reduced, inconspicuous (Fig. 1a). Typical parapodia with widely separated rami (Fig. 1b). Notopodia reduced to papillar lobes; neuropodia well developed, projecting beyond body wall (Fig. 1b). Dorsal and ventral cirri cirriform throughout, tapering, pointed, with those of setigers 1-4 appearing about equally developed (right ventral cirrus of setiger 2 missing from holotype) (Fig. 1a); ceratophores smooth.

Branchiae from setiger 2 continuing to the end of the body; branchiae arising as tufts resembling dendritic processes on posterior notopodial surfaces (Figs. 1a-b).

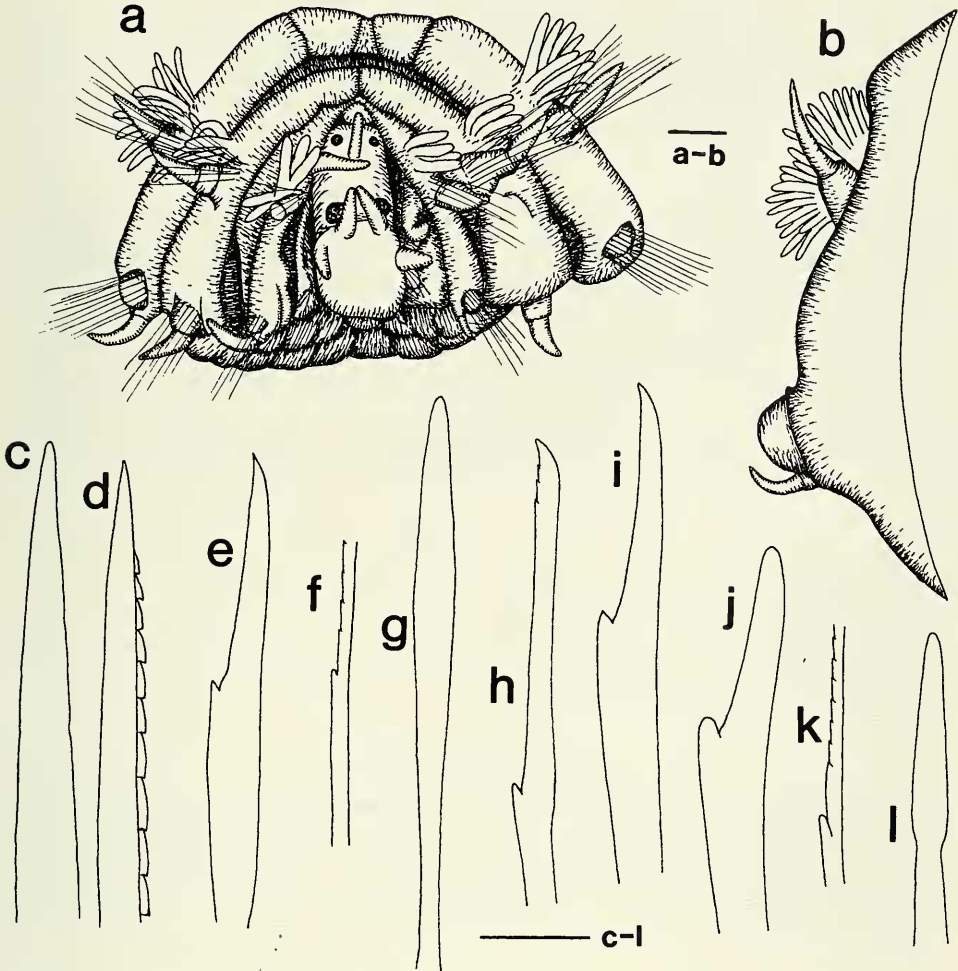


Fig. 1. a-l. Holotype, USNM 97288, *Pseudeurythoe reducta*. a, anterior segments, frontal view; b, median parapodium, anterior view; c, thick, smooth notosetal spine; d, harpoon notoseta, lateral view; e, forked notoseta, lateral view; f, serrated capillary seta showing detail of spur, lateral view; g, notoaciculum, lateral view; h, thin-shafted, forked neuroseta, lateral view; i-j, thick-shafted, forked neuroseta, lateral view; k, serrated capillary neuroseta showing detail of basal spur, lateral view; l, neuroaciculum, lateral view. Scales: a-b = 0.2 mm; c-l = μm .

Notosetae of six kinds; 1) thick, smooth spines (Fig. 1c); 2) harpoon setae (Fig. 1d); 3) forked spines with denticulate cutting margins (Fig. 1e); 4) long, slender smooth capillaries; 5) long, slender, basally spurred capillaries with denticulate cutting margins (Fig. 1f); and 6) long, distally inflated acicula numbering four per notopodium (Fig. 1g). Neurosetae of four kinds: 1) forked spines having thin shafts and long, distally serrated cutting margins (Fig. 1h); 2) forked spines having thick shafts and smooth cutting surfaces (Figs. 1i-j); 3) slender, conspicuously spurred capillaries having denticulate cutting margins (Fig. 1k); and 4) stout, distally inflated acicula, numbering three per neuropodium (Fig. 1l).

Pygidium dorsal with a midventral terminal papilla.

Remarks.—*Pseudeurythoe reducta* belongs to a small eastern Pacific species group in which the branchiae extend the full length of the body instead of being limited to anterior segments as is typical for the genus. Related species include *P. oculata* (Treadwell) and *P. tripunctata* Kudenov. *P. reducta* differs from both of these species in that branchiae are first present from setiger 2 instead of 3. As a group, all three species occur intertidally and are related ecologically and zoogeographically as well as morphologically. *P. reducta* is the most northern species, occurring in sand-mud sediments of central California. *P. tripunctata* and *P. oculata* occur either in mangroves or sandy sediments of western Mexico and Central America (Treadwell 1941; Kudenov 1975; Fauchald 1977).

Very little is known concerning the habits and mode of life of *Pseudeurythoe* species. Despite an older census (MacGinitie 1935) and numerous recent studies by the Moss Landing Marine Laboratories only a single complete specimen of *P. reducta* has turned up in the Elkhorn Slough, now a National Marine Sanctuary. It is possible that the habits of *P. reducta* are cryptic. A species tentatively identified as *P. ambigua* Monro has been reported from box core samples in the lower Chesapeake Bay (Karl, Diaz, Boesch, and Kravitz 1980). This species has been shown to be most abundant in anoxic sediments below 10 cm and is greatly undersampled by grabs. It is possible that *P. reducta* occupies a similar deep habitat in sediments of California estuaries.

Etymology.—The epithet, *reducta*, refers to the remarkable reduction of setiger 1. It is regarded as a noun in apposition.

Distribution.—Elkhorn Slough, California.

Acknowledgments

We are grateful to Nancy Maciolek Blake for reading and commenting on this paper. Rod Bertelsen supplied ecological information on the Chesapeake Bay species. The specimen on which this report is based was collected as part of a 316A demonstration survey of the Elkhorn Slough for Pacific Gas & Electric Company.

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Accepted for publication 9 March 1984.

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